

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|------------------------------|--------------------|------------------|---------|------------------|
| L1 | 172 | isoprostane or \$isoprostane | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:43 |
| L2 | 129 | physiological | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:43 |
| L3 | 0 | 1 and 2 | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:43 |
| L4 | 130 | 1 and stress | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:44 |
| L5 | 1 | psycho-neuro-endocrine | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:46 |
| L6 | 29 | pyschological | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:46 |
| L7 | 1 | 1 and 6 | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:46 |

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|------------------------------|--------------------|------------------|---------|------------------|
| L1 | 172 | isoprostane or \$isoprostane | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:43 |
| L2 | 129 | physicological | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:43 |
| L3 | 0 | 1 and 2 | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:43 |
| L4 | 130 | 1 and stress | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:44 |
| L5 | 1 | psycho-neuro-endocrine | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:46 |
| L6 | 29 | pyschological | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:46 |
| L7 | 1 | 1 and 6 | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:47 |
| L8 | 75 | 1 same stress | US-PGPUB; USPAT | OR | ON | 2005/09/19 09:47 |

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|--------------------------|--------------------|------------------|---------|------------------|
| L1 | 614 | psychological adj stress | US-PGPUB; USPAT | OR | ON | 2005/09/19 12:48 |
| L2 | 113 | \$isoprostane | US-PGPUB; USPAT | OR | ON | 2005/09/19 12:48 |
| L3 | 2 | 1 and 2 | US-PGPUB; USPAT | OR | ON | 2005/09/19 12:54 |
| L4 | 3 | 2 and psychological | US-PGPUB; USPAT | OR | ON | 2005/09/19 12:55 |

(FILE 'HOME' ENTERED AT 10:06:42 ON 19 SEP 2005)

FILE 'EMBASE, BIOSIS, CAPLUS, SCISEARCH, MEDLINE' ENTERED AT 10:07:02 ON
19 SEP 2005

L1 10197 S (PSYCHOLOGICAL (W) STRESS) OR (PSYCHO-NEURO-ENDOCRINE (W) STR
L2 7310 S ISOPROSTANE? OR ?ISOPROSTANE
L3 1 S L1 AND L2
L4 206226 S OXIDATIVE (W) STRESS
L5 60 S L1 AND L4
L6 20 S L1 (S) L4
L7 9 DUPLICATE REM L6 (11 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 10:14:57 ON 19 SEP 2005

=>

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|-----------------------------------------------------------|-----------------|------------------|---------|------------------|
| L1 | 154 | prostaglandin-like adj compound or (pg-like adj compound) | US-PGPUB; USPAT | OR | ON | 2005/09/19 15:09 |
| L2 | 172 | isoprostane or \$isoprostane | US-PGPUB; USPAT | OR | ON | 2005/09/19 15:09 |
| L3 | 15 | 1 and 2 | US-PGPUB; USPAT | OR | ON | 2005/09/19 15:13 |
| L4 | 0 | 2 and (emotional adj stress) | US-PGPUB; USPAT | OR | ON | 2005/09/19 15:14 |

(FILE 'HOME' ENTERED AT 15:39:08 ON 19 SEP 2005)

FILE 'EMBASE, BIOSIS, CAPLUS, SCISEARCH, MEDLINE' ENTERED AT 15:39:23 ON
19 SEP 2005

| | | |
|----|----------|-----------------------------|
| L1 | 438 S | PROTAGLADIN-LIKE OR PG-LIKE |
| L2 | 465761 S | PSYCHOLOGICAL |
| L3 | 0 S | L1 AND L2 |
| L4 | 0 S | L1 AND EMOTIONAL |
| L5 | 12965 S | EMOTIONAL (W) STRESS |
| L6 | 5100 S | ?ISOPROSTANE |
| L7 | 0 S | L5 AND L6 |

(FILE 'HOME' ENTERED AT 08:26:07 ON 20 SEP 2005)

FILE 'EMBASE, BIOSIS, CAPLUS, SCISEARCH, MEDLINE' ENTERED AT 08:26:19 ON
20 SEP 2005

| | |
|----|--------------------------------------------------|
| L1 | 136 S (PSYCHOLOGICAL OR EMOTIONAL) (S) OXIDATIVE |
| L2 | 127 S L1 (S) STRESS |
| L3 | 57 DUPLICATE REM L2 (70 DUPLICATES REMOVED) |
| L4 | 0 S L3 AND ISOPROSTANE |

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|---------------------------------------------|-----------------|------------------|---------|------------------|
| L1 | 27 | (psychological or emotional) same oxidative | US-PGPUB; USPAT | OR | ON | 2005/09/20 07:58 |
| L2 | 24 | 1 same stress | US-PGPUB; USPAT | OR | ON | 2005/09/20 07:58 |

on STN

DUPLICATE 18

- TI **Oxidative** damage of nuclear DNA in liver of rats exposed to
psychological stress.
- AB Male Sprague-Dawley rats were exposed to conditioned **emotional**
stimuli in a communication box, which is much more psychologically
conditioned **stress** than the commonly used restraint and water
immersion, to investigate the induction of **oxidative** DNA damage
by **psychological stress**. Significantly higher levels
of 8-hydroxy-2'-deoxyguanosine in rat liver nuclear DNA than in the
controls [1.46 ± 0.19 (SD) 8-hydroxy-2'-deoxyguanosine/105
deoxyguanosine] were detected immediately after the second ($1.90 \pm$
 0.27 , $P < 0.01$), third (3.10 ± 0.94 , $P < 0.01$), and fourth exposure
(2.95 ± 1.17 , $P < 0.01$) to conditioned emotional stimuli. This is the
first evidence that **oxidative** damage to nuclear DNA is induced
by **psychological stress**.
- SO Cancer Research, (1993) Vol. 53, No. 18, pp. 4153-4155.
ISSN: 0008-5472 CODEN: CNREA8
- AU Adachi S.; Kawamura K.; Takemoto K.

L3 ANSWER 20 OF 57 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 9

TI Changes in clinically relevant metabolites with psychological stress
parameters.

AB **Psychological stress** is associated with increased
oxidative stress, a proinflammatory state, increased
rate of infection, and cardiovascular disease. Cardiovascular disease
also is associated with increased stress, homocysteine, and C-reactive
protein (CRP) levels. In this study, the authors measured various markers
of **psychological stress** and correlated with
homocysteine, CRP, salivary IgA, and **oxidative stress**.
The results of the study showed that psychological stress is associated
with pro-oxidant and pro-inflammatory states as evidenced by either
decreased NT levels and/or increased CRP concentrations. Conversely,
positive or low stress parameters, indicating good life skill mechanisms
were associated with increased NT and decreased CRP-indications of a low
pro-oxidant state. Homocysteine was associated with increased anger
(anger-suppression and anger-experience), psychological parameters
associated with cardiovascular disease and also mildly elevated CRP and
homocysteine levels. Psychological well-being and stress are correlated
with biochemical parameters both positively and negatively in relation to
immunity and cardiovascular disease processes. The cross-sectional design
and correlational approach used in this study preclude any inferences of
causality but suggest several potentially useful avenues for future
research.

SO Behavioral Medicine, (Summer 2003) Vol. 29, No. 2, pp. 52-59. print.
ISSN: 0896-4289.

AU Hapuarachchi, John R. [Reprint Author]; Chalmers, Ainsley H.; Winefield,
Anthony H.; Blake-Mortimer, Jane S.

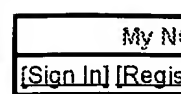
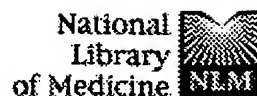
L3 ANSWER 22 OF 57 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 10

TI Psychological stress increases bilirubin metabolites in human urine.

AB Some authors have suggested that psychological stress induces the
production of reactive oxygen species (ROS). Some studies have supported
that bilirubin exerts anti-oxidative effects in vivo. However, it is not
known whether ROS induced by psychological stress provoke bilirubin
oxidation in vivo. We investigated if the concentration of bilirubin
oxidative metabolite (BOM), a bilirubin **oxidative**
metabolite, increased in urine from subjects exposed to
psychological stress. Sixty healthy male volunteers
working in a pharmaceutical company were divided into a Group I which did
not attend a conference, a Group II which attended a conference but did
not deliver a speech, and a Group III which attended a conference and
delivered speeches in the presence of the company executives. Subjective
stress was scored (self-rating score) after subjects in Group III
delivered their speeches at the conference. Urine was collected on the
next day. The BOM concentrations, as measured by enzyme-linked
immunosorbent assay, were normalized to the urinary concentration of
creatinine. The concentration of BOM in Group III was significantly
higher compared to that in Groups I and II ($p < 0.01$ and $p < 0.05$,
respectively). Furthermore, in Group III, the concentration of BOM
correlated with the self-rating stress score ($r = 0.53$, $p < 0.01$). These
findings suggest that **emotional** stimuli are associated with an
increase in the **oxidative** metabolites of bilirubin in human
urine, and that BOMs could be useful markers of **psychological**
stress. .COPYRGT. 2002 Elsevier Science (USA). All rights
reserved.

SO Biochemical and Biophysical Research Communications, (2002) Vol. 293, No.
1, pp. 517-520.
Refs: 35
ISSN: 0006-291X CODEN: BBRCA

AU Yamaguchi T.; Shioji I.; Sugimoto A.; Yamaoka M.



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ClinicalTrials.gov

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☐ 1: Pharmazie. 1996 Jan;51(1):51-3.

Related Articles, Links

Lipid peroxidation during acute stress.

Kovacs P, Juranek I, Stankovicova T, Svec P.

Department of Pharmacology, Comenius University, Bratislava, Slovak Republic.

Lipid peroxidation (LPO) is one of the main events induced by oxidative stress. The aim of our study was to investigate the influence of 30 min cold-immobilization (model of acute stress used in this experiment) on LPO in the brain, heart, liver and stomach homogenates of the rats. LPO was determined by measuring of the contents of thiobarbituric acid reactive substances (TBARS), conjugated dienes (CD) and sulfhydryl groups (SH). Experimental stress induced enhancement of TBARS formation in the liver and increased level of the CD in the heart, stomach and liver, while in the brain both parameters were found to be decreased. The levels of TBARS were not changed in the heart and in the stomach, too. The concentrations of SH-groups were decreased in the heart, brain and stomach, while in the liver the parameter was found to be not changed. The results of this study showed the increase of LPO in the heart, stomach and liver under stress conditions. It could be supposed that LPO may be involved in mechanisms of stress injury in different tissues.

PMID: 8999436 [PubMed - indexed for MEDLINE]

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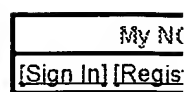
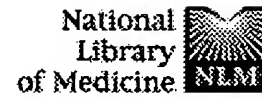
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ClinicalTrials.gov

PubMed Central

1: AACN Clin Issues. 2002 Nov;13(4):540-9.

Related Articles, Links



Oxidative stress, DNA damage, and breast cancer.

Kang DH.

School of Nursing, University of Alabama-Birmingham, Birmingham, AL 35294-1210, USA. kangd@uab.edu

Oxidative stress is a disturbance in the balance between the production of reactive oxygen species (ROS) and antioxidant defenses. It occurs when excessive production of ROS overwhelms the antioxidant defense system or when there is a significant decrease or lack of antioxidant defenses.

Oxidative stress, in turn, is known to cause DNA damage and mutations of tumor suppressor genes that are critical initial events in carcinogenesis. Interestingly, early findings of the studies suggest that environmental factors, such as high psychological stress and poor nutritional profile (eg, low antioxidant and high fat intake), increase ROS production. Given that breast cancer is a complex disorder in which gene-environment interactions play a significant role in the development of cancer, oxidative stress may be an excellent model for exploring mechanisms mediating gene-environment interactions for nurse scientists and advanced practice nurses. Such investigations may help to suggest future strategies for nonpharmacological interventions for decreasing cancer risk.

Publication Types:

- Review

PMID: 12473916 [PubMed - indexed for MEDLINE]

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L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:252755 CAPLUS
 DN 140:281858
 TI Diagnosis of human **psychological stress** through the
 use of **isoprostanes** as a biol. marker and immunoassay for
isoprostane determination
 IN Cobain, Mark Robert; Powell, Jonathan Richard; Talbot, Duncan Charles
 Stuart
 PA Unilever Plc, UK; Unilever N.V.; Hindustan Lever Limited
 SO PCT Int. Appl., 24 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN. CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------------------------------------------------------|------|----------|-----------------|----------|
| PI | WO 2004025303 | A2 | 20040325 | WO 2003-EP9826 | 20030903 |
| | WO 2004025303 | A3 | 20041014 | | |
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| EP | 1537422 | A2 | 20050608 | EP 2003-794988 | 20030903 |
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| PRAI | GB 2002-21306 | A | 20020913 | | |
| | WO 2003-EP9826 | W | 20030903 | | |